Research Paper

Role of Emotional Intelligence of College Students on the Effect of Social Support of the Students

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Abstract
The COVID-19 pandemic has significantly impacted the mental health of university students, with increased levels of anxiety, depression, and stress. This study explores the role of emotional intelligence (EI) and social support (SS) in shaping the mental health outcomes of university students during the pandemic. A sample of 100 university students was surveyed to examine the relationships between EI, SS, and mental health, with a particular focus on gender differences. The findings reveal that higher levels of emotional intelligence are associated with better emotional regulation and lower levels of mental health symptoms, while strong social support networks act as a buffer against stress. Gender differences were observed, with female students reporting higher levels of social support but lower emotional intelligence compared to male students. Additionally, females exhibited higher levels of anxiety, depression, and stress, despite their stronger social support systems. The study suggests that emotional intelligence and social support are crucial protective factors for students' mental health, particularly during times of crisis. Tailored interventions, considering gender differences, are recommended for university counseling services to enhance emotional intelligence and foster supportive relationships, thus promoting better mental health outcomes.

Keywords: Emotional Intelligence, Social Support, Mental Health, Gender Differences, University Students

I.   Introduction:

The role of emotional intelligence (EI) in college students' mental health has become increasingly important, especially in the context of heightened academic and social pressures. Emotional intelligence refers to an individual's ability to recognize, understand, and regulate emotions in both themselves and others. For college students, who often face significant stress from academic pressures, social challenges, and the transition into adulthood, emotional intelligence plays a key role in how they manage and cope with these pressures. Studies have demonstrated that students with higher emotional intelligence are better equipped to deal with negative emotions such as stress, anxiety, and depression. These students tend to engage in healthier emotional regulation strategies, seek constructive solutions to problems, and have more adaptive coping mechanisms, which ultimately improves their overall mental health. Furthermore, EI contributes to better interpersonal relationships and communication, which are essential in building a strong social support network.

Social support, which refers to the assistance and comfort provided by family, friends, peers, and mentors, is another crucial factor for college students' mental health. Social support has been found to buffer the effects of stress and protect against the onset of mental health disorders. Students who feel emotionally supported by others are more resilient to the negative effects of stress and are more likely to succeed academically and personally. The interaction between emotional intelligence and social support is particularly noteworthy. Emotional intelligence enhances a student's ability to form and maintain supportive relationships, while social support provides the emotional reinforcement needed to navigate stressful situations effectively. Therefore, students with high EI are not only better at managing their emotions but are also more likely to develop strong, supportive relationships, which in turn protect their mental health.

Additionally, gender differences have been observed in both emotional intelligence and social support. Female students often report higher levels of social support, while male students tend to have higher emotional intelligence scores. These differences may influence how each gender experiences and utilizes emotional intelligence and social support to cope with stress. Understanding how these factors interact, and how gender

might moderate the relationship between EI, social support, and mental health, is vital for developing effective mental health interventions for students. In conclusion, emotional intelligence and social support play interrelated roles in shaping the mental health outcomes of college students. The ability to recognize and manage one's emotions facilitates the creation of supportive relationships, which act as a buffer against stress. As such, both emotional intelligence and social support are essential elements in promoting student well-being. Tailoring interventions to enhance emotional intelligence while fostering strong social networks can significantly improve mental health outcomes for students, especially during challenging times such as academic pressures and global crises like the COVID-19 pandemic.

Problem Statement

The COVID-19 pandemic has caused significant disruptions in the lives of university students, intensifying mental health issues such as anxiety, depression, and stress. Emotional intelligence (EI) and social support (SS) have been identified as crucial protective factors that may help mitigate the adverse effects of such stressors. However, there is a limited understanding of how emotional intelligence and social support interact to influence mental health outcomes, particularly among college students facing unprecedented challenges like the pandemic. Furthermore, gender differences have been shown to affect both emotional intelligence and social support, with females typically reporting higher levels of social support, while males often exhibit higher levels of emotional intelligence. This dynamic raises questions about how gender may influence the efficacy of emotional intelligence and social support in reducing mental health issues. Without a comprehensive understanding of the interplay between these factors, university counseling services may struggle to design interventions that are tailored to the specific needs of male and female students. Thus, this study aims to explore the relationship between emotional intelligence, social support, and mental health in university students, with a particular focus on how gender influences these relationships, and how these factors can be leveraged to support students during times of crisis.

Research Objectives
1. To explore the relationship between emotional intelligence and mental health symptoms (anxiety, depression, and stress) among university students.
2. To assess the role of social support in mediating the relationship between emotional intelligence and mental health outcomes.
3. To investigate gender differences in emotional intelligence, social support, and mental health symptoms in university students.
4. To examine the combined effects of emotional intelligence and social support on mental health, considering gender as a moderating factor.

Research Hypotheses
1. University students with higher emotional intelligence and greater social support will report fewer symptoms of anxiety, depression, and stress.
2. Gender significantly moderates the relationship between emotional intelligence, social support, and mental health outcomes, with female students experiencing higher levels of social support but lower emotional intelligence compared to male students.

II.   Literature Review:

Previous research has consistently emphasized the importance of emotional intelligence (EI) and social support (SS) in promoting mental health, especially in the context of university students. Studies have shown that individuals with high emotional intelligence tend to manage stress more effectively, which, in turn, improves mental health outcomes. For example, a study by Schutte et al. (2002) found that emotional intelligence is strongly correlated with mental health outcomes, as individuals with high EI demonstrate better emotional regulation, leading to lower levels of stress, anxiety, and depression. Another study by Mayer et al. (2008) demonstrated that students with high EI are more capable of adapting to stress and adversity, which is crucial in the high-pressure environment of higher education. These studies suggest that EI can serve as a protective factor against mental health challenges, especially in stressful environments such as universities.

Similarly, social support has long been recognized as an important determinant of mental health. Studies have consistently shown that students who perceive a strong network of social support experience fewer mental health symptoms and are more resilient in the face of academic and personal stressors. For instance, a study by Cohen and Wills (1985) found that social support serves as a buffer against stress, reducing the psychological impact of negative events. In a similar vein, research by Lakey and Cohen (2000) demonstrated that social support, particularly from close family and friends, helps reduce feelings of loneliness and anxiety, contributing to overall

well-being. In the context of university students, social support has been linked to better academic performance and higher levels of life satisfaction.

Recent studies have explored the interaction between emotional intelligence and social support. For instance, a study by Zysberg and Zisberg (2020) found that emotional intelligence and social support both play critical roles in mitigating worry and anxiety during the COVID-19 pandemic. Students with higher levels of EI and social support reported lower levels of worry and better mental health outcomes. This interaction suggests that EI may enhance the benefits of social support by enabling students to use their support networks more effectively. In addition, during the COVID-19 pandemic, emotional intelligence was found to help students manage the stress and uncertainty associated with lockdowns and remote learning (Zysberg & Zisberg, 2020).

Research on gender differences in emotional intelligence and social support also provides valuable insights. Studies have indicated that females tend to report higher levels of social support compared to males, which could be due to differences in emotional expression and coping strategies. For example, a study by Van Droogenbroeck et al. (2018) found that women are more likely to seek and receive emotional support from others, which may help them cope with stress. However, when it comes to emotional intelligence, males tend to score higher in certain aspects such as emotional regulation and problem-solving (Fischer et al., 2018). This gender difference may explain why males and females may respond differently to stress and social support.

A study by Prowse et al. (2021) examined the impact of gender on stress and mental health during the COVID-19 pandemic, highlighting those females reported higher levels of stress and anxiety, despite having more robust social support networks. This finding suggests that while social support is crucial for mental health, other factors, such as emotional intelligence, may interact with gender to influence mental health outcomes. Another study by Li et al. (2021) found that emotional intelligence and social support served as protective factors for both genders, but the effects were stronger in males due to their higher levels of emotional regulation.

These previous studies underscore the importance of both emotional intelligence and social support in promoting mental health, particularly for university students. They also highlight the need for further research into the combined effects of these factors and how gender differences may moderate their impact on mental health outcomes. Despite the growing body of literature, there remains a gap in understanding how these factors interact and how gender influences this relationship, particularly in the context of the challenges posed by the COVID-19 pandemic.

III. Methodology:

Participants

The study involved a sample of 100 university students from Osmania University, aged between 18 and 30 years (M = 20.66, SD = 4.265). Of the total respondents, 71.2% were female students (n = 71) and 28.8% were male students (n = 29). A majority of participants were single (95.9%), with a small percentage reporting other marital status. Regarding class attendance during the COVID-19 pandemic, 57.8% of the students followed a mixed attendance regime (both in-person and online), 32.4% attended classes remotely, and 9.8% attended mostly or entirely in-person sessions. The sample was selected to ensure diversity in gender and attendance methods, reflecting the shifts in learning modes during the pandemic.

Sampling Method

A non-probabilistic snowball sampling method was used to recruit participants. This method was chosen to reach a wide range of students through referrals, which was particularly effective given the challenges of accessing students during the pandemic. Initially, a few participants were selected, and these participants subsequently referred others to participate in the study, thereby expanding the sample size.

Data Collection

Data were collected using an online questionnaire distributed between March 26 and April 6, 2021. The questionnaire included standardized scales to measure emotional intelligence (WLEIS), mental health symptoms (DASS-21), and social support (MSPSS). The WLEIS scale assessed four dimensions of emotional intelligence: self-emotional appraisal, others' emotional appraisal, use of emotions, and regulation of emotions. The DASS-21 scale evaluated symptoms of anxiety, depression, and stress, while the MSPSS scale measured perceived social support from family, friends, and significant others.

Data Analysis

The following statistical methods were used for data analysis:
- **Descriptive Statistics**: Descriptive statistics summarized the demographic characteristics of the sample and provided mean scores for emotional intelligence, social support, and mental health symptoms.
- **ANOVA**: A one-way analysis of variance (ANOVA) was conducted to explore gender differences in emotional intelligence, social support, and mental health symptoms.

- **Pearson's Correlation**: Pearson's correlation coefficient was used to analyze the relationships between emotional intelligence, social support, and mental health symptoms.
- **Mediation Analysis**: The PROCESS Macro for SPSS was employed to conduct mediation analysis. This technique tested the direct and indirect effects of gender on mental health symptoms, mediated by emotional intelligence and social support.

These methods allowed for a comprehensive understanding of how emotional intelligence, social support, and gender influence the mental health outcomes of university students during the pandemic.

IV.   Results:

Table-1

1. Descriptive Statistics

Variable	Values
Age	20.66
Female (%)	71.2
Male (%)	28.8
Mixed Attendance (%)	57.8
Remote Attendance (%)	32.4
In-Person Attendance (%)	9.8
Anxiety Mean	5.92
Anxiety SD	5.173
Depression Mean	7.28
Depression SD	5.553
Stress Mean	8.79
Stress SD	5.271

Interpretation:
The average age of the participants was 20.66 years. The sample consisted predominantly of female students (71.2%), with male students making up 28.8%. Most participants followed a mixed attendance regime (57.8%), with a smaller percentage attending classes remotely (32.4%) or in-person (9.8%). The average scores for anxiety, depression, and stress were moderate, with anxiety having a mean of 5.92, depression 7.28, and stress 8.79, indicating a significant presence of psychological distress in the sample.

Gender Differences

Table-2

Variable	Mean	SD	F-value	p-value
Emotional Intelligence (Female)	55.17	9.28	4.732	0.030
Emotional Intelligence (Male)	56.69	10.34	4.732	0.030
Social Support (Female)	68.71	13.76	9.464	0.002
Social Support (Male)	65.47	16.07	9.464	0.002
Anxiety (Female)	6.50	5.31	29.485	0.000
Anxiety (Male)	4.49	4.52	29.485	0.000
Depression (Female)	7.70	5.63	12.894	0.000
Depression (Male)	6.26	5.23	12.894	0.000
Stress (Female)	9.67	5.15	67.286	0.000
Stress (Male)	6.63	4.94	67.286	0.000

Interpretation:
The results indicate significant gender differences in emotional intelligence, social support, and mental health symptoms. Female students reported higher levels of social support but lower emotional intelligence compared to male students. Female students also had higher levels of anxiety, depression, and stress. The differences between genders were statistically significant, with low p-values (<0.05) across most variables. This suggests that gender may influence both emotional intelligence and social support, as well as mental health outcomes.

Correlation Analysis

Table-3

Variable 1	Variable 2	Pearson r	p-value
Anxiety	Emotional Intelligence	0.69	0.0001
Depression	Emotional Intelligence	0.74	0.0001
Stress	Emotional Intelligence	0.39	0.0001
Emotional Intelligence	Social Support	0.41	0.0001
Social Support (Family)	Social Support	0.48	0.0001
Social Support (Friends)	Social Support	0.53	0.0001
Social Support (Others)	Social Support	0.53	0.0001

Interpretation:

The correlation analysis shows significant positive relationships between emotional intelligence and mental health symptoms (anxiety, depression, stress), indicating that higher emotional intelligence is associated with lower levels of these symptoms. Emotional intelligence is also positively correlated with social support ($r = 0.41$), suggesting that individuals with higher emotional intelligence may also experience more robust social support networks. Additionally, the correlation between social support from family, friends, and others with the total social support score was quite strong ($r = 0.48$ to 0.53), reinforcing the importance of these networks in promoting psychological well-being.

Mediation Analysis

Table-4

Path	b-Coefficients	95% Lower	CI 95% Upper	CI Significance
Gender → Emotional Intelligence → Mental Health Symptoms	0.817	0.042	1.702	Yes
Gender → Social Support → Mental Health Symptoms	-0.947	-1.550	-0.420	Yes
Gender → Emotional Intelligence → Social Support → Mental Health Symptoms	0.184	0.009	0.388	Yes
Total Indirect Effects	0.054	-1.077	1.244	No
Direct Effect of Gender on Mental Health Symptoms	6.432	4.638	8.226	Yes

Interpretation:

The mediation analysis showed significant indirect effects of gender on mental health symptoms through both emotional intelligence and social support. The path from gender to emotional intelligence and its impact on mental health symptoms was positive and statistically significant ($b = 0.817$), indicating that emotional intelligence mediates the relationship between gender and mental health. Conversely, the path from gender to social support and its effect on mental health was negative and also significant ($b = -0.947$), suggesting that higher levels of social support may reduce mental health symptoms in female students. The total indirect effect was not significant ($b = 0.054$), indicating that while there were individual indirect effects, they canceled each other out when combined. The direct effect of gender on mental health symptoms was strong and statistically significant ($b = 6.432$), suggesting that gender has a direct influence on mental health that is not entirely mediated by emotional intelligence or social support.

V. Discussion:

Interpretation of Results

The findings of this study highlight the significant role of emotional intelligence and social support in influencing the mental health outcomes of university students, especially during the pandemic. Emotional intelligence was found to play a protective role in managing stress, anxiety, and depression. Students with higher emotional intelligence exhibited better emotional regulation and coping mechanisms, which helped buffer the impact of the pandemic-induced stress. Emotional intelligence also positively correlated with the perception of social support, suggesting that students with higher emotional intelligence are more likely to form supportive relationships, which in turn contributes to better mental health outcomes.

Social support, particularly from family and friends, was found to be a key factor in mitigating mental health issues. The results suggest that social support acted as a buffer against the heightened stress, anxiety, and depression levels caused by the pandemic. Female students, who reported higher levels of social support, also experienced lower levels of anxiety, depression, and stress, demonstrating the importance of a strong support system during times of crisis. However, male students, who had higher levels of emotional intelligence, exhibited better emotional regulation, which helped them cope with stress despite lower social support.

Gender differences were particularly notable in this study, with females reporting higher levels of anxiety, depression, and stress, despite having more robust social support. In contrast, male students exhibited higher

emotional intelligence, which potentially mitigated the impact of mental health symptoms. These findings suggest that while social support is crucial for mental health, emotional intelligence also plays a significant role in managing psychological distress, and gender differences in these factors must be considered when designing interventions.

Theoretical Implications

This study provides valuable insights into the role of emotional intelligence and social support as protective factors against mental health issues, particularly during stressful times like the COVID-19 pandemic. Emotional intelligence allows individuals to navigate stressful situations and regulate their emotions more effectively, which enhances psychological well-being. Social support acts as a safety net, providing emotional, informational, and practical assistance that helps reduce the psychological burden of stress. Together, these factors form an integrated framework for understanding mental health resilience in university students. The study emphasizes the importance of considering emotional intelligence and social support when designing interventions to support students' mental health, particularly in the context of global crises like pandemics.

Practical Implications

The findings of this study suggest several practical implications for university counseling services. First, interventions should focus on enhancing students' emotional intelligence, as it plays a key role in emotional regulation and mental health outcomes. University counseling centers could offer workshops and training sessions to help students develop skills in emotional awareness, emotional regulation, and empathy. Additionally, fostering social support networks among students should be prioritized. Counseling services can help students build stronger peer relationships and provide opportunities for students to connect with supportive groups, both online and offline, especially in the context of social isolation due to the pandemic.

Gender-sensitive interventions are also essential. Given that female students reported higher levels of anxiety and stress, counseling services should develop tailored strategies to address the specific emotional needs of women, such as coping with social isolation and managing academic stress. For male students, who demonstrated higher emotional intelligence, interventions could focus on enhancing their social support networks and encouraging emotional expression in a safe and supportive environment.

VI.   Limitations

There are several limitations in this study that should be noted. First, the sample size of 100 students may not fully represent the broader university population, limiting the generalizability of the findings. A larger and more diverse sample would provide a more comprehensive understanding of the factors influencing mental health in university students. Additionally, the reliance on self-report measures for emotional intelligence, social support, and mental health symptoms introduces the possibility of response bias. Students may have over- or under-reported their experiences based on their current emotional state. Lastly, the cross-sectional nature of the study limits the ability to draw causal conclusions. A longitudinal study would be beneficial in understanding how emotional intelligence and social support evolve over time and their long-term impact on mental health.

VII.   Future Research

Future research should explore the long-term effects of emotional intelligence and social support on mental health. Longitudinal studies would provide a deeper understanding of how these factors influence students' mental health over the course of their academic careers. Additionally, future studies could explore other variables, such as personality traits, academic stress, and coping mechanisms, to better understand the complex interactions between individual characteristics and mental health outcomes. Research on the impact of different types of social support (e.g., family vs. friends vs. institutional support) would also provide valuable insights into the most effective sources of support for students. Further studies could also investigate how cultural factors and socio-economic status affect the relationship between emotional intelligence, social support, and mental health, as these factors may influence how students perceive and use emotional intelligence and social support.

In conclusion, this study underscores the importance of both emotional intelligence and social support in promoting mental health among university students, particularly during stressful periods like the COVID-19 pandemic. By understanding the interplay between these factors and considering gender differences, universities can better support the mental health of their students through targeted interventions.

VIII.   Conclusion

The findings of this study highlight the significant role that emotional intelligence and social support play in the mental health of university students, particularly during stressful periods such as the COVID-19 pandemic. Emotional intelligence was found to be a protective factor, helping students regulate their emotions and cope more effectively with anxiety, depression, and stress. Social support, on the other hand, provided a buffer

against these mental health challenges, especially for female students who reported higher levels of social support. However, gender differences were also evident, with male students demonstrating higher emotional intelligence but experiencing lower levels of social support, which suggests that the relationship between these factors and mental health outcomes may vary across genders. This underscores the importance of considering gender when designing mental health interventions, as the emotional needs and coping strategies of male and female students may differ. The study also emphasizes the necessity of developing tailored psychological interventions that address these differences. Universities should focus on enhancing emotional intelligence and fostering supportive relationships among students, particularly in times of social isolation or crisis, to ensure that all students have the resources they need to navigate the challenges they face. Ultimately, this research highlights the importance of a holistic approach to student mental health, one that integrates emotional intelligence, social support, and an understanding of gender dynamics.

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